

**INTERIM ACTION MEMORANDUM**  
**AMENDMENT**

Regarding Cooling Pond Portion of the  
Stimson Lumber Company Bonner Mill Property  
Missoula County, Montana

Montana Department of Environmental Quality

Prepared by  
Remediation Division  
Federal Superfund Section

October 2011

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## **I. PURPOSE**

The purpose of this Interim Action Memorandum Amendment (Amendment) is to clarify the requirements for the disposal of certain PCB-contaminated soils that were excavated during the removal of the Cooling Pond and Berm in accordance with the Interim Action Memorandum (Action Memo) and the Administrative Order on Consent (AOC), DEQ Docket No. SF-10-0001, issued in April 2010. The management of those materials under the Toxic Substances Control Act (TSCA), the federal law which directly addresses PCB wastes, would differ substantially from the more stringent requirements of DEQ under certain state authorities, and this Amendment will provide specific requirements for the disposal of certain materials which were identified as clean under in-situ sampling protocols consistent with TSCA requirements, but which DEQ is requiring be handled and disposed of as contaminated materials under DEQ's other authorities. As described below, approximately 37,000 cubic yards of soils with residual levels of PCB contamination will be placed in a repository on the Bonner Mill property.

## **II. SITE CONDITIONS AND BACKGROUND**

The Site conditions and background are described in detail in the Action Memo. Most of the actions required in the Action Memo have been completed, including the excavation of the Cooling Pond and Berm and reconstruction and initial revegetation of the river bank in its former location, as well as excavation of contaminated materials in the Fire Pond Lagoon area and those areas where the contamination extended back from the riverbank at levels above the specified cleanup levels. Some residual contamination was left in place under concrete foundations and where excavation would have destabilized buildings, and those areas will be covered by appropriate institutional controls. Certain petroleum contamination left in place will be further addressed under Petroleum Technical Section Release No. 4161. Further details regarding the materials removed and actions completed will be presented in a final report required under the AOC.

During implementation of the Work, a question arose about the appropriate disposal of certain materials excavated from the Cooling Pond and Berm area. EPA regulations under TSCA addressing PCB remediation waste provide, "Any person cleaning up and disposing of PCBs managed under this section shall do so based on the concentration at which the PCBs are found." 40 CFR § 761.61. Based on this regulation, EPA requires a specific sampling protocol that determines the removal and disposal of PCB-contaminated soils based on the in-situ sampling results. Using the grid and depth in-situ sampling protocol consistent with TSCA requirements, all materials identified as having a concentration between 0.74 and 50.0 mg/kg (parts per million or ppm) PCBs were loaded onto trucks after they were excavated and were hauled to and disposed of at the Allied Waste Landfill in Missoula in accordance with the AOC.

Materials that were identified by the TSCA in-situ sampling protocol as clean material were stockpiled on site, intended to be reused as appropriate in the reconstruction of the riverbank after removal of the Cooling Pond and Berm. However, as with all material to be used for reconstruction of the riverbank, DEQ required sampling to determine if the material would meet the level DEQ had identified for protection of the riverbank, 0.22 ppm PCBs. That sampling revealed a residual level of contamination in what had been identified by the in-situ sampling protocols as clean material. The levels of contamination in these stockpiled materials ranged from 0.51 to 5.3 ppm. Additional sampling of the most contaminated stockpiled materials was required by DEQ in order to determine the leachability of the residual PCB contamination in these materials. This sampling, conducted in October 2011, showed PCB contamination in three samples taken from the most contaminated portion of the stockpiles at levels of 2.9, 3.3, and 10 ppm.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The Action Memo includes a detailed discussion of the threats to public health or welfare or the environment that needed to be addressed in the Cooling Pond, Berm, and Fire Pond Lagoon area. Those threats have been substantially addressed by the excavation and removal of the contaminated material as required in the Action Memo and the AOC, and all remaining requirements of the AOC and Work Plan will be completed as required by DEQ. This Action Memorandum Amendment clarifies and specifies the requirements for disposal of certain of the excavated materials to allow the required actions to be completed in a manner that protects public health and welfare and the environment.

### **IV. ENDANGERMENT DETERMINATION**

As noted in the Action Memo, actual or threatened releases of hazardous or deleterious substances, pollutants and contaminants from the Cooling Pond, Berm, and Fire Pond Lagoon area, if not addressed by implementing the action selected in the Action Memorandum, would have continued to present an imminent and substantial endangerment to public health, or welfare, or the environment. This Amendment clarifies the specific requirements for the disposal of certain of the excavated materials which are currently stockpiled, to eliminate uncertainty regarding the requirements so that they may be properly disposed and the actions required under the AOC can be completed.

### **V. SELECTED ACTION AND ESTIMATED COSTS**

Most of the actions described in the Action Memo have been completed by Stimson Lumber Company in accordance with the requirements of the AOC. The actions described in the Action Memo remain the selected actions except as specifically clarified, modified, or expanded by this Amendment. This Amendment addresses the disposal of the approximately 37,000 cubic yards of material which was stockpiled because it had been identified through in-situ sampling as not exceeding cleanup levels, but which, when later sampled as required by DEQ, showed residual levels of PCB contamination ranging up to 10 ppm.

## A. Development of Alternatives.

Stimson Lumber Company initially proposed placing the 37,000 cubic yards of stockpiled material in two separate on-site locations, with 16,600 cubic yards of the material to go on top of the existing repository for material containing PCBs at levels from 0.22 ppm to 0.74 ppm, which is located in the former kiln area, and the remaining 20,400 cubic yards going into a concrete-lined area near the river, referred to as the log processing area.

The log processing area would have required stormwater management using a sump and pumping system, and while that area was out of the 100-year flood plain, it was directly at the top of the river bank. DEQ, DOJ, and Missoula County indicated concern with the use of that area, and Stimson substituted an alternate location for that portion of the stockpile, an area lined by concrete in the east log processing area. This area was further from the river than the other log processing area but still closer to the river than the kiln area. Stimson also outlined an alternative for placement of the entire 37,000 cubic yards in the former kiln area, allowing one repository location for all of the material. The other alternative considered by DEQ for possible disposal of the material is disposal at the Allied Waste Municipal Landfill for Missoula.

## B. Comparison of Alternatives.

A clear disadvantage of on-site disposal is the loss of useable property and development potential. Having more than one on-site repository would further increase the loss of usable property. Splitting the material between two repositories, using the east log processing area as the second repository, would occupy a total footprint of 3.1 acres. Placing all the material in the expanded kiln area alone would occupy approximately 2.3 acres. Since a portion of the kiln area is already a repository for the low-level PCB-contaminated materials, and will have use restrictions under the existing institutional control requirements of the Action Memo and the AOC, the additional area lost by placing all the material in the kiln repository is effectively 0.8 acres (2.3 acres less the existing kiln repository footprint of 1.5 acres).

Among the alternatives for on-site disposal, costs also favor one repository rather than two, not only in construction but also in operation and maintenance. Costs for cap maintenance and monitoring of the repository, including additional monitoring wells, would be substantially increased for two repositories. Thus for the on-site options, one repository at the kiln area is favored over the other alternatives. A disadvantage of the single repository is that the mound created would be very prominent at approximately 18 feet high with a footprint of 300 feet by 330 feet. Tree planting or other actions could be taken over time to reduce the visual impact of the repository.

If offsite disposal at the Allied Waste Landfill were selected, the additional loss of 0.8 acres and the visual impact of the repository could be avoided. However the cost of disposal at the Allied Waste Landfill is substantially greater. The tipping fee alone at the Allied Waste Landfill for this material would be approximately \$750,000, without considering the costs of haul and handling of the materials. Total disposal costs would be approximately \$1.1 million. The cost of placing the materials in the on-site repository is estimated at approximately \$450,000 to \$500,000. The additional cost of off-site disposal, at over \$600,000, would be completely

disproportionate to the 0.8 acres of additional land lost for future development, if the material can be properly and safely disposed in the proposed on-site repository.

### C. Protectiveness of the On-site Repository

At the levels of contamination appearing in the stockpiled materials, placement in an on-site repository with appropriate cover material as required by DEQ, can be adequately protective and can comply with ARARs/ERCLs, even applying all of DEQ's requirements that are more stringent than the TSCA requirements for PCBs.

As noted in the Action Memo, DEQ had determined that materials containing PCBs at 0.75 ppm or more had the potential to leach PCBs into groundwater.<sup>1</sup> The 0.75 leachability level was calculated using standard assumptions without any site-specific analysis. DEQ has since required Stimson to directly test the stockpiled materials using the Synthetic Precipitation Leaching Procedure (SPLP) to calculate a site-specific leaching to groundwater soil screening level. The SPLP results, obtained in October 2011, showed that the specific stockpiled materials now proposed for placement in an on-site repository do not pose a threat for leaching of PCBs.<sup>2</sup>

Moreover, all the leachability calculations have used an assumption of only 0.1 meter (less than 4 inches) separation from groundwater, so they could be applied anywhere that contaminated soils might be left or placed. For the placement of materials in the kiln repository, the actual depth to groundwater can be used. That depth is estimated to be greater than 20 feet based on available data from other wells at the site, but will be confirmed by placement of monitoring wells in the kiln area. Thus the actual depth to groundwater in this location would provide an additional safety factor to ensure that disposal of these materials in the kiln repository would not pose a threat to the groundwater.

In addition, to ensure compliance with ARARs/ERCLS, DEQ would require a two-foot thick cover of clean material over the contaminated materials, including a six-inch vegetative layer, with specific revegetation requirements. This cover will ensure no direct human contact with the contamination and no dust or other exposure to people at the site or adjacent areas such as the nearby school. Regular monitoring and inspection of the cap, sampling of monitoring wells, imposition of appropriate institutional controls, and financial assurance for operation and maintenance will also be required to ensure compliance with ARAR/ERCLs. Thus the onsite

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<sup>1</sup> In discussing selection of the cleanup level of 0.74 ppm for PCBs, the Action Memo stated, at p. 17,

The use of this level is also supported by DEQ's calculations of the potential for contaminant leaching to groundwater, which indicated that the PCB-contaminated materials should not be left in place or placed on the property at a level of 0.75 mg/kg or greater. See DEQ's soil screening level guidance at: [http://www.deq.state.mt.us/StateSuperfund/VCRA\\_Guide/SoilScreeningProcess11-08.pdf](http://www.deq.state.mt.us/StateSuperfund/VCRA_Guide/SoilScreeningProcess11-08.pdf).

<sup>2</sup> Three SPLP samples were obtained from the most contaminated section of the stockpiled materials. The samples contained PCBs at levels of 2.9, 3.3, and 10 ppm. To ensure maximum protectiveness, the 3.3 ppm sample, which showed the greatest leachability, was used in the site-specific leachability calculation. Based on this calculation, materials would not pose a threat of leaching at levels which could cause an exceedance of MCLs in groundwater unless the concentration of the materials exceeded 13.75 ppm. The highest level of PCBs detected in the stockpiled materials was below this level, at 10 ppm.

disposal can and will be implemented in a manner that ensures protection of public health, safety and welfare and the environment, attains ARARs/ERCLs, and meets the other statutory requirements discussed in Section VIII below.

#### D. Public Comment

In its evaluation of the alternatives, DEQ has considered concerns expressed during the public comment period on the EE/CA as well as the public comment period on the AOC with respect to leaving contaminated materials at the site. In these two prior comment periods, comments received from various individuals and from Missoula County strongly favored removal of as much material as possible from the site.

In the EE/CA, one of the proposed alternatives was for an on-site repository, and most of the comments favored an alternative that disposed of most materials at the landfill rather than on-site. See Action Memo, Attachment 2, DEQ Responsiveness Summary for the Stimson Lumber Co. Cooling Pond and Berm Draft Engineering Evaluation and Cost Analysis (DEQ, October 2009).

The AOC and Work Plan provided for leaving certain low-level contaminated wastes on-site, and some of the comments during that comment period also urged removal of all PCB-contaminated material to the landfill. See Responsiveness Summary for Administrative Order on Consent and Work Plan for the Stimson Lumber Company Cooling Pond, Berm, and Fire Pond Lagoon Area (DEQ, April 2010).

Thus the issue of on-site disposal has been the focus of comment during two different comment periods. DEQ does not need to hold another comment period to know that on-site disposal is not favored by the community or the County. DEQ recognizes the benefits of maximizing potential future uses of the property by removing contaminated materials from the site to the maximum extent practicable.

A number of comments submitted during the comment periods also requested that this action be conducted and completed as quickly as possible so that the property can be redeveloped, and the clarifications proposed in this Amendment should allow completion of the project within the next couple months. Stimson Lumber Company currently has a buy/sell agreement with a prospective purchaser, and has requested resolution of this issue by DEQ prior to the scheduled closing in November. A prompt decision by DEQ may help facilitate redevelopment of the property, a goal of nearly all the commenters during both comment periods.

While not delaying a decision for a formal comment period, DEQ did ask Missoula County to review the proposals and draft work plans submitted by Stimson and received comment letters from the County on the alternatives and draft plans. Those letters are included in the administrative record for this Amendment. Generally, the County's concerns are consistent with its previously-stated goals of maximizing off-site disposal to enhance the redevelopment potential of the property. Certain specific concerns have been addressed by, for example, dropping the proposed repository location in the log processing area at the top of the riverbank, as well as the second location in the east log processing area.

In its prior decisions, DEQ determined that in spite of the comments received, it was appropriate to allow on-site disposal of the materials below DEQ's industrial cleanup level of 0.74 ppm but above the residential/riverbank cleanup level of 0.22 ppm. This Amendment resolves an issue that was not anticipated in the Action Memo or the AOC, how to dispose of materials that were identified through the in-situ sampling as below even the 0.22 ppm level, but which actually showed residual levels of contamination when sampled after removal as required by DEQ.

It is important to recognize that, under the TSCA sampling protocols as well as TSCA's standard cleanup levels, this material could simply be graded out over a large area within the site if land use restrictions were imposed to ensure only low-occupancy uses in the area. Consistent with the goals sought in most of the comments received, DEQ is requiring cleanup to more stringent levels and is requiring the consolidation of the materials in one location so that formal land use restrictions are limited to a small portion of the site.

As discussed above, it is not necessary to remove this material from the site to meet the criteria for selection of response actions, and this action is one that DEQ could have selected in its initial issuance of the Action Memo, had the issues regarding this material been known at that time. While community acceptance is a modifying criterion to be considered, it is not adequate to justify the expenditure of over \$600,000 in additional costs to preserve use of less than one additional acre of land at the site. Allowing expansion of the existing repository to include the stockpiled materials is, in DEQ's judgment, the appropriate disposition of these materials even in light of the clear public preference for off-site disposal.

#### E. Summary

Because the alternative of leaving contamination on-site has been addressed in two prior comment periods, DEQ did not hold an additional comment period for this evaluation. DEQ has considered the comments previously submitted, as well as the direct input from the County on the specific alternatives and draft work plans for this proposed action. Recognizing that the comment does not favor this alternative, DEQ has still determined that on-site disposal is an appropriate action here, since it is adequately protective and meets the other requirements for selection as an alternative. Concerns about the redevelopment potential of the property, while relevant and considered by DEQ, cannot outweigh the substantial additional expense of off-site disposal, when such expense is not necessary to achieve protectiveness and compliance with cleanup requirements. Therefore, the Action Memo is clarified and modified herein to allow disposal of the approximately 37,000 cubic yards of stockpiled material, as described above, in the kiln repository area, utilizing a design to be approved by DEQ.

#### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

The clarifications provided in this Amendment will allow the actions to be completed and the stockpiled materials to be properly disposed.

## **VII. ENFORCEMENT**

The current owner and operator of the facility is the Stimson Lumber Company. Stimson has been performing the actions set forth in the Action Memo in accordance with the requirements of the AOC. DEQ expects to approve a modification to the Work Plan attached to the AOC to provide for disposal of the materials discussed in this Amendment on the Bonner Mill Site, in accordance with the requirements of the Action Memo, as clarified by this Amendment.

## **VIII. STATUTORY DETERMINATIONS**

Under Section 75-10-721, MCA, of CECRA, and consistent with Section 121 of CERCLA, 42 USC § 9621, DEQ must select an action that will attain a degree of cleanup of the hazardous and deleterious substance and control of a threatened release or further release of that substance that assures protection of public health, safety, and welfare and of the environment. In approving or carrying out such actions, DEQ must require cleanup consistent with applicable or relevant and appropriate environmental requirements, criteria or limitations (ARARs/ERCLs), as described in CECRA and CERCLA. In addition, DEQ must select a remedy considering present and reasonably anticipated future uses, giving due consideration to institutional controls. The selected action must mitigate risk, be effective and reliable in the short- and long-term, be practicable and implementable, and use treatment or resource recovery technologies, if practicable, giving due consideration to engineering controls. The selected action must also be cost-effective.

As described in the Action Memo, this Amendment, and the EE/CA, the selected action, including the clarifications and modifications described in this Amendment, is protective of public health, safety, and welfare and the environment, complies with ARARs/ERCLs, mitigates risk, is effective in the short- and long-term, is practicable and implementable, and is cost-effective.

## **IX. ADMINISTRATIVE RECORD**

The documents relied upon by DEQ in making this decision and issuing this Amendment, i.e., the administrative record for this decision, consists of those documents existing as of the date of execution of this Amendment (or prepared in connection with the issuance and distribution of this Amendment) and maintained in the public site files for the Stimson Lumber Cooling Pond by the Federal Superfund Section of the Remediation Division, File Guide No. 3-1-21, or maintained in the public site files for Release # 4161 by the Petroleum Technical Section in the Remediation Division of DEQ. These documents are available for inspection and copying in the offices of the Remediation Division located at 1100 N. Last Chance Gulch, Helena, MT 59601.



## **X. RECOMMENDATION**

This decision document modifies and clarifies the selected interim remedial action for the Cooling Pond, Berm, and Fire Pond Lagoon area at the Stimson Bonner Mill in Bonner, Montana, developed in accordance with the WQA, CERCLA, and CECRA. As required by CERCLA, this action is not inconsistent with the NCP. Approval of this Interim Action Memorandum Amendment is recommended by the staff and management of the Federal Superfund Section, in coordination with the Petroleum Technical Section, and by Remediation Division Management and Legal Counsel. If approved, please indicate your approval by signing below.

Approved and Issued.



Richard H. Oppen, Director  
Department of Environmental Quality

Date:

10/26/11